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MODEL CPL
CASSETTE PROGRAM LOADER
OPERATING INSTRUCTIONS

KAYE INSTRUMENTS INC. 15 DE ANGELO DR., BEDFORD, MASS. 01730

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MODEL CPL CASSETTE PROGRAM LOADER
OPERATING INSTRUCTIONS

Introduction

Kaye Instruments' Model CPL Cassette Program Loader is a program recording and playback module designed specifically for use with the Digistrip III process monitor. It consists of a serial data interface coupled with a cassette recorder. When used in connection with a Digistrip III, the Cassette Program Loader is capable of offloading and reloading complete program information to and from recording tape cassettes. Using this device, a complete Digistrip program may be offloaded or reloaded in less than three minutes.

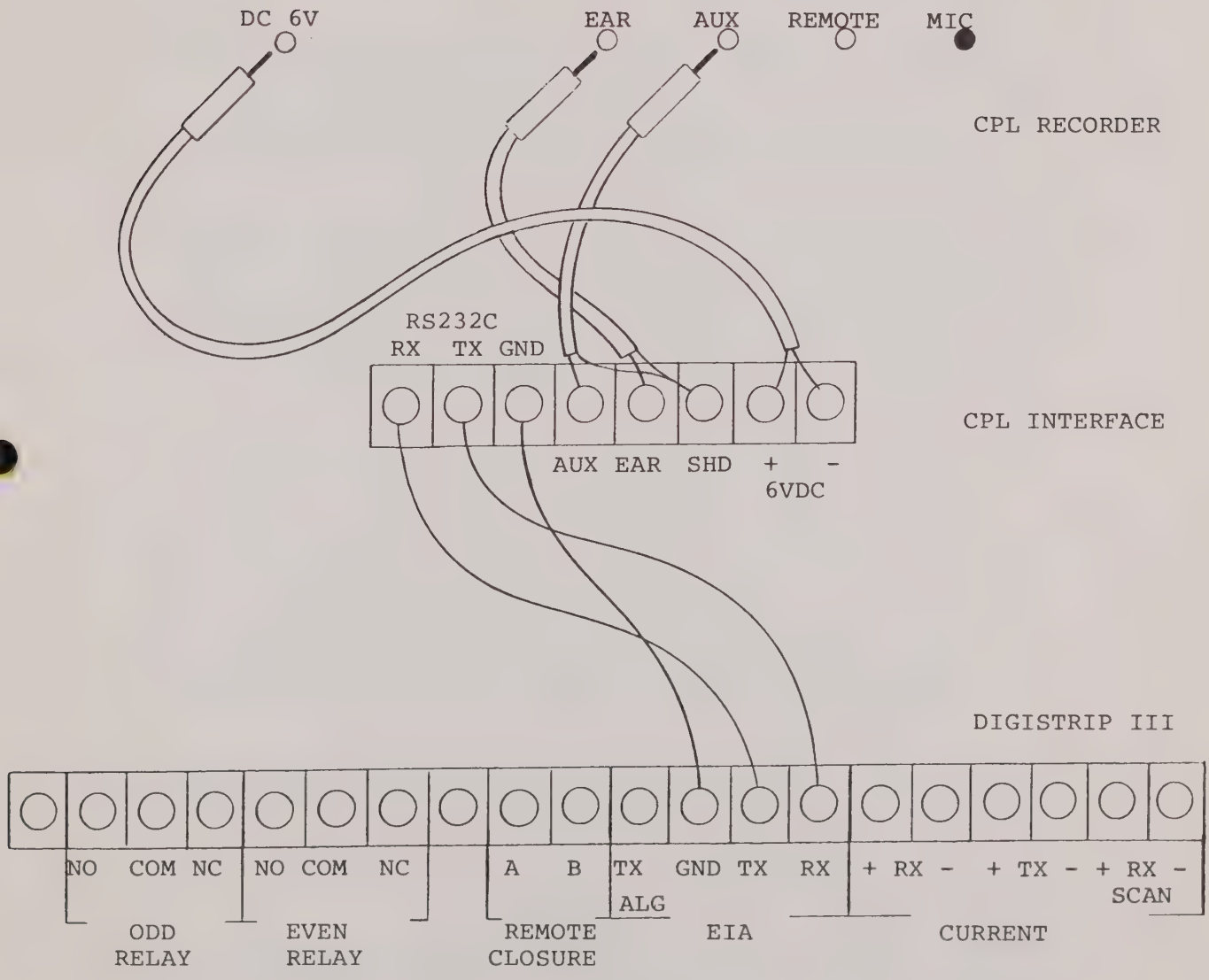
The Cassette Program Loader is particularly useful as a time-saving device when offloading and reloading multiple programs for a single Digistrip. It also is useful for loading the same program into more than one Digistrip. The Cassette Program Loader cannot be used to record input measurement data.

Installation

When used in conjunction with a Digistrip III, the Cassette Program Loader normally is placed in close proximity to the Digistrip unit. Once in position, the two units are connected as shown in the diagram on page 3. After these connections are made, the power cord is connected between the CPL base unit and a properly grounded wall receptacle. Whenever the power cord is in place, the unit's power is ON. When a Cassette Program Loader is used for program offloading or reloading, the volume control on the recorder must be set between 8 and 10 and the tone control must be set on HIGH.

Note: For cassette recorders having an unnumbered volume control, a dot on the control marks the desired volume setting.

CPL/DIGISTRIP III CONNECTIONS



Note: For cassette recorders having no AUX jack, the AUX plug must be inserted into the MIC jack.

Operation

To Offload a Program:

1. With the Cassette Program Loader properly installed and connected to a Digistrip III, make sure that the Digistrip's power switch is turned ON and that the instrument is set for Program Mode operation.

2. Insert a good quality audio tape cassette into the recorder.

   Note: Cassettes used with this equipment must contain good quality (i.e. extra low noise, etc.) standard audio tape. Chromium Dioxide and other special tapes should not be used.

3. Check to make sure that the Program Offload/Reload feature is enabled. To do this, press the CONFIG NUMBER key four times to call up the display of the programmed value of Configuration Number 4. In order for the Program Offload/Reload feature to be enabled, digit 2 of Configuration Number 4 must be 2, 3, 6, or 7. If digit 2 is not appropriately programmed, it must be reprogrammed at this time.

   Note: When a Cassette Program Loader is used with certain early production Digistrip III units, the Digistrip's continuous transmission feature must be disabled. This is done by making sure that digit 5 of Configuration Number 4 is defined as zero. To determine if your Digistrip is one of these early production units, check the code numbers marked on the PROMs (memory chips) located in position M602 through M607 on the Data Acquisition board (left side of chassis). For all units with PROMs coded A1 through E5, the continuous transmission feature must be disabled as described above.

4. With Configuration Number 4 still displayed in the Digistrip's front panel, start the recording operation by depressing the PLAY and RECORD buttons simultaneously.

5. Record a leader (a series of stop bits) by allowing the tape to run for approximately 20 seconds.

6. Without stopping the tape, initiate a Program Offload by pressing the LIST PROGRAM key. Once the Program Offload operation has begun, the Digistrip's printer will print out the message PROGRAM LOAD START. The Program Offload operation will be completed in less than three minutes. Upon completion of the operation, the printer will print out the message PROGRAM LOAD DONE.

7. Once the Program Offload operation is completed, depress the STOP button to stop the tape. At this point, a copy of the program has been recorded on the tape, while the original program remains in the Digistrip's memory.

8. Depress the REWIND button to rewind the tape; depress the EJECT button to eject it from the recorder.

Notes:

- Each program must be preceded by a recorded leader of approximately 20 seconds length.

- Once a program has been recorded onto a tape, that information may be protected against accidental over-recording by breaking out one or both of the record-enable tabs. These tabs are located on the back end of the cassette. When the cassette is viewed from the rear end, the tab on the right controls the upward facing side, while the one on the left controls the opposite side. Once either of these tabs has been removed, the corresponding side of the cassette cannot be over-recorded. To over-record a side with its record-enable tab removed, cover the opening with tape.

To Reload a Program:

1. With the Cassette Program Loader properly installed and connected to the Digistrip III, turn the Digistrip's power switch ON.

2. Initialize the Digistrip by rapidly flicking the PROGRAM/RUN switch down-up-down (PROGRAM-RUN-PROGRAM) one time.

3. With the PROGRAM/RUN switch set in the PROGRAM position, press the TIME key, key in the new time information, then press the ENTER key.

4. With the time still displayed in the Digistrip's front panel, start the tape by depressing the PLAY button on the recorder. Once the recorded leader has been run off and the Program Reload operation started, the Digistrip's printer will print out the message PROGRAM LOAD START. The Program Reload operation will be completed in less than three minutes. Upon completion of the reload, the printer will print out the message PROGRAM LOAD DONE.

   Note: The software of the Cassette Program Loader contains an automatic playback error detection and correction feature. This feature is implemented by a combination of transverse and longitudinal redundancy checks. Correctable errors in a Program Reload operation are indicated by a short beep tone from the Digistrip. Uncorrectable errors cause the Digistrip to emit a long beep tone and print out the message PROGRAM LOAD**ERROR**. Whenever an uncorrectable error occurs, the Program Reload operation must be repeated.

5. Upon completion of the Program Reload operation, depress the STOP button to stop the tape. At this point, a copy of the program information from the tape has been reprogrammed into the instrument, while the recorded information remains on the tape.

6. Depress the REWIND button to rewind the tape; depress the EJECT button to eject it from the recorder.

Alternative Program Transfer Techniques

As alternatives to the use of the Kaye Model CPL Cassette Program Loader, several brands of digital cassette recorders are available. When appropriately hooked up to a Digistrip III, most of these recorders can be used to conduct program offload or reload operations. The procedures followed when using this equipment are similar to those described in the Operation section above.

Program information also may be transferred directly from one Digistrip III to another. The procedures used in this technique also are similar to those described in the Operation section above.

The following table provides information on how to connect a Digistrip III to a digital cassette recorder or another Digistrip III for the purpose of program transfers.

ALTERNATIVE PROGRAM TRANSFER CONNECTIONS

From Digistrip III (Program Source)	To Digital Recorder (with RS232C Standard 25-Pin Connector)	(or) To Digistrip III (Second Unit)*
EIA TX	Pin #3	EIA RX
EIA RX	Pin #2	EIA TX
EIA GND	Pin #7	EIA GND

* When used for program transfer from one Digistrip III unit to another.

CPL SPECIFICATIONS

Dimensions:	15.3cm high x 15.3cm wide x 30.6cm deep (6½ in high x 6½ in wide x 13 in deep)
Weight:	4.54 kg (10 lbs)
Input Voltage:	115 VAC (50/60 Hz) or 230 VAC (50/60 Hz)
Power Consumption:	10 watts
Fuse:	0.5A Slo-Blo (115 VAC) 0.25A Slo-Blo (230 VAC)
Environmental:	10-45°C (50-113°F) Temperature Range 0-95% Relative Humidity (non-condensing)
Data Transmission Mode:	RS-232C Specification
Data Transmission Rate:	1200 Baud
Connectors:	Screw Terminals

Warranty

Kaye Instruments equipment is warranted free from manufacturing and material defects for a period of one year after delivery. Any equipment purchased from Kaye Instruments which becomes defective during this period will be repaired or replaced at the site of the customer or at the Kaye plant in Bedford, Massachusetts. The site of such repair shall be determined by Kaye Instruments. The only exception to this warranty is equipment such as a magnetic tape recorder, a paper tape punch, a computer or other equipment which is used in conjunction with a Kaye system, but is not a standard Kaye Instruments product. Such equipment will be warranted for a period of 30 days by Kaye Instruments if it is purchased from Kaye as part of a system. Warranty for a longer period may be provided by the manufacturer of the equipment.

Equipment returned to the Kaye plant for repair must have shipping charges prepaid and must be accompanied by documentation explaining the reason for return. Please obtain return authorization from Kaye's Service Department prior to returning any equipment for repair.

Kaye Instruments reserves the right to make changes or improvements in its products without incurring any obligation with respect to products previously manufactured. All warranties are contingent upon proper use in the application for which the products were intended and do not cover products which have been modified without Kaye Instruments' approval or which have been subjected to unusual physical or electrical stress.

Except for the express warranty set forth above, Kaye Instruments grants no warranties, either expressed or implied, on products, and the stated express warranty is in lieu of all liabilities or obligations of Kaye Instruments for damages including, but not limited to, consequential damages occuring out of or in connection with the use or performance of Kaye Instruments products.

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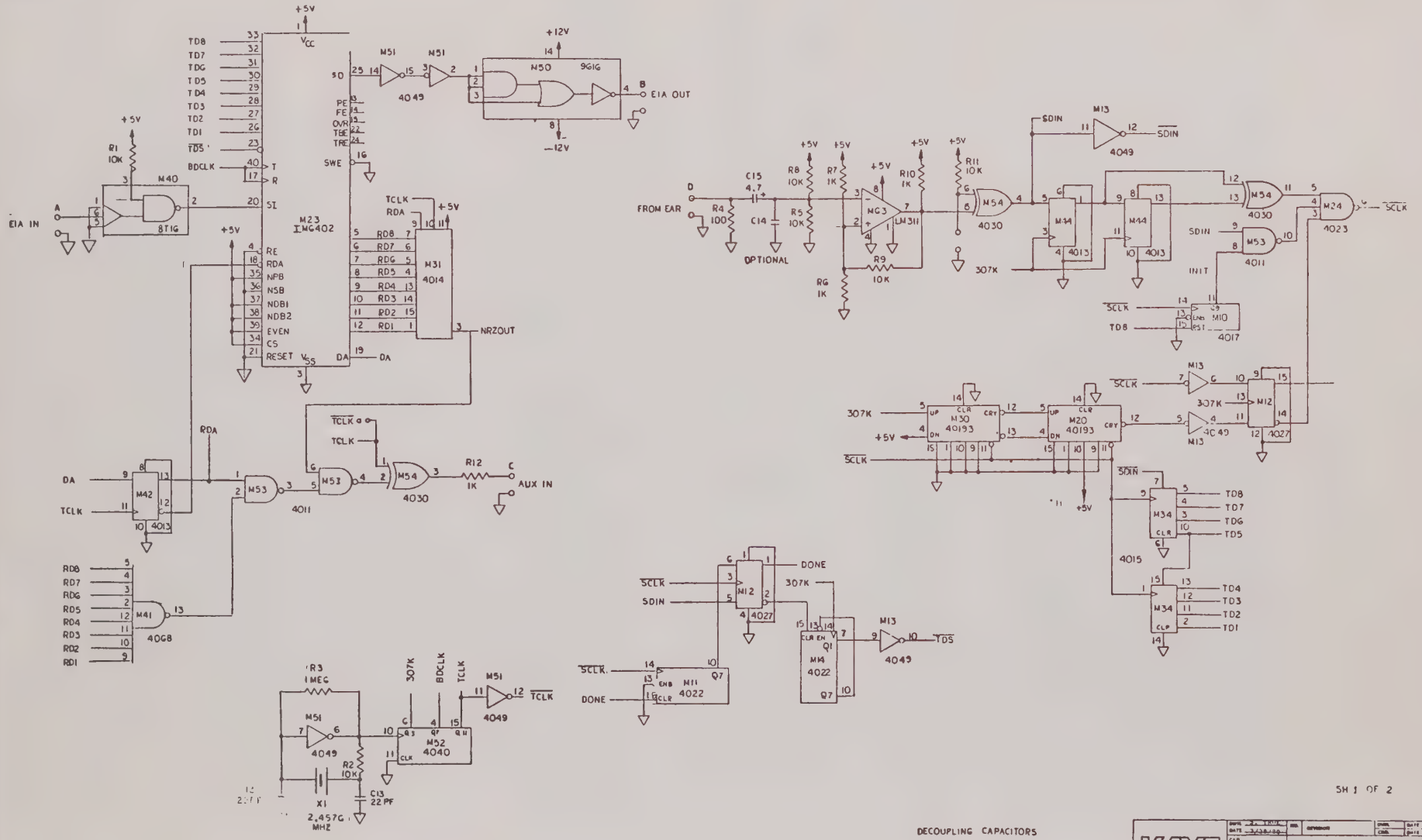

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DECOUPLING CAPACITORS
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15UF C10

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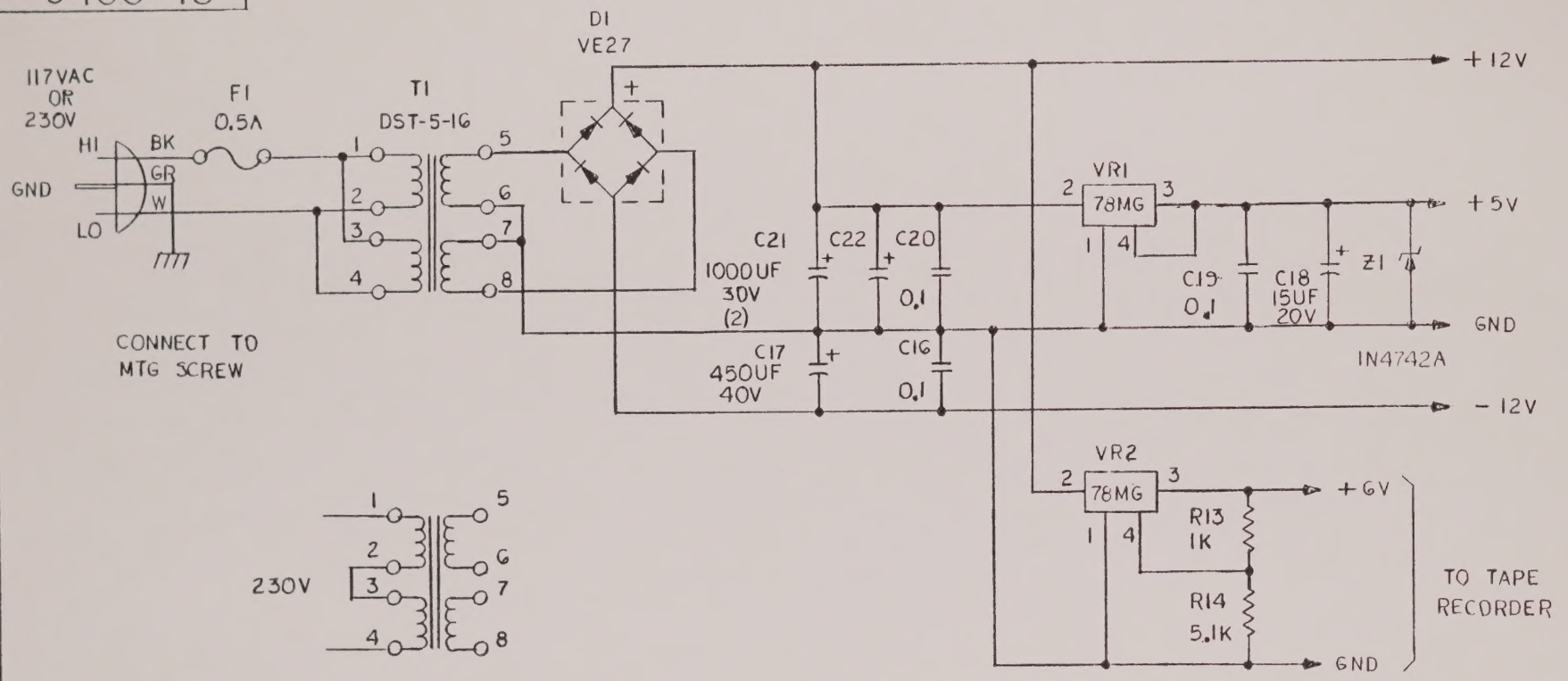

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